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Defense Acquisition in Transition

6TH ANNUAL ACQUISITION RESEARCH SYMPOSIUM

New Patterns of Collaboration and Rivalry in the US and European Defense and Aerospace Industries

Raymond Franck, Ira Lewis, Bernard Udis

Naval Postgraduate School

PANEL 17, 14 MAY 2009

PART OF A CONTINUING EFFORT TO UNDERSTAND AN INCREASINGLY COMPLEX ENVIRONMENT

- FY07/08: “Echoes across the Pond: Understanding EU-US Defense Industrial Relationships” (last year’s Symposium)
- FY08: “New Patterns of Rivalry and Collaboration in the US and European Defense and Aerospace Industries” (today)
- FY09: “Global Cooperation and Competition in the Defense and Aerospace Industries” (in progress)



OUTLINE

- INTRODUCTION
- BOEING 787
- KC-45 COMPETITION
- FOREIGN DIRECT INVESTMENT IN US DEFENSE MARKET
 - BAE
 - EADS
 - FINMECANICA
- SOME CONCLUDING THOUGHTS



BOEING 787: an Extrapolation From the B777 Project

CONTEXT: THE B-777 SUCCESS

- CARBON FIBER REINFORCED PLASTIC (CFRP)
- EXTENSIVE OUTSOURCING
- “PAPERLESS” DESIGN



B-787, A NEW TYPE

- EXTENSIVE USE OF COMPOSITES (CFRP)
- INCREASED FUEL EFFICIENCY (~20%)
- PASSENGER AMENITIES
 - HIGHER HUMIDITY
 - LARGER WINDOWS
- EVEN MORE OUTSOURCING
 - 70% OF AIRFRAME
 - ... WITH 30 TIER 1 SUPPLIERS
 - METHOD OF SHARING RISK
- COMMERCIAL SUCCESS, MEASURED BY INITIAL ORDERS



SUPPLY CHAIN PROBLEMS

- RELIED ON PAST RECORD OF “TRUSTED RELATIONSHIPS” WITH SUPPLIERS
- FAST-PACED PROGRAMS
- INSUFFICIENT MONITORING
- DELAYS FOR FIXING
- ➔ MID-PROJECT VERTICAL INTEGRATION
 - SOME ASSEMBLY AND SYSTEMS INTEGRATION FUNCTIONS RETURN TO BOEING
- BENEFITS NONETHELESS, SUCH AS FACILITATING INNOVATION IN LOWER TIERS



IMPLICATIONS FOR DOD

- GLOBALIZATION AS FACT
- CONTINUING IMPORTANCE OF BEING A KNOWLEDGEABLE CUSTOMER
 - ... FOR BOTH INTERMEDIATE AND FINAL PRODUCTS
 - ... WITH IMPLICATIONS FOR HUMAN CAPITAL POLICY
- EMULATING SUCCESSFUL “COMMERCIAL PRACTICES” IS NO PANACEA
 - E.G., BETTER TO HAVE EMULATED TOYOTA THAN EXTRAPOLATED FROM THE 777 PROJECT



KC-45 CONTEXT

- AERIAL REFUELING AS A CORE COMPETENCE ...
SINE QUA NON OF POWER PROJECTION
- AGING OF KC-135 FLEET
 - RISKS OF HIGH COSTS, LOW AVAILABILITY
 - ILLUSTRATED BY CURRENT KC-135Es
- KC-767 LEASING OPTION
 - STARTING RECAPITALIZATION
 - HEDGE AGAINST KC-135 FAILURE
 - ... A RATHER BIZARRE ENDING



“KC-X” COMPETITION

- “Key Performance Parameters”, AND “Best Value”
- FINAL RFP, 31 JAN 2007
 - NG-EADS OBJECTION TO ORIGINAL RFP
- EXTENSIVE PUBLICITY, LOBBYING CAMPAIGNS
 - TO INCLUDE A KC-30 OFFSET PACKAGE
- AWARD TO KC-30, 29 FEB 08 ... CLOSE



BOEING'S PROTEST, 11 MAR 08 ... SUSTAINED

- GROUNDS FOR PROTEST INCLUDED ...
 - WEIGHTING OF “EXTRA” FUEL AND PASSENGER CAPACITY
 - EVALUATION OF RISKS
 - COST ASSESSMENTS
 - EFFECTS OF BASING CHARACTERISTICS (ESPECIALLY RAMP SPACE NEEDS)
- SUSTAINED BY GAO, 18 JUN 08
 - “SUBSTANTIAL,” SIGNIFICANT ERRORS
 - SEEMED TO GO BEYOND KEY BOEING ALLEGATIONS



ABORTIVE NEW COMPETITION

- “AMENDMENTS AND CLARIFICATIONS” TO RFP ISSUED, 6 AUG 08 ... WITH SOURCE SELECTION LATE 2008
- BOEING THREATENS TO PULL OUT ... INSUFFICIENT TIME FOR COMPETITIVE PROPOSAL
- UPDATE: COMPETITION SLIPPED
- CURRENT STATE: MULTIPLE VETO HOLDERS ... GRIDLOCK?



SOME HYPOTHESES, AS QUESTIONS

- ARE PROTESTS INEVITABLE?
 - VERY SMALL NUMBER OF LARGE, WINNER-TAKES-ALL COMPETITIONS
- IS A PROTEST-PROOF SELECTION CONSISTENTLY ACHIEVEABLE?
 - COULD NG-EADS HAVE SUCCESSFULLY PROTESTED AN AWARD TO BOEING?
 - IS “PERFECTO” CONSISTENTLY DOABLE?
- SHOULD WE RECONSIDER THE STANDARD MODEL?
 - SOVEREIGN MONOPSONIST VS. COMPETITORS
 - QUARRELSOME COMMITTEE VS. AGILE OLIGOPOLISTS



RECOMMENDATIONS

- RESOLVING THE KC-45 GRIDLOCK
 - DUAL SOURCING?
 - OUT-OF-COURT SETTLEMENT?
- GLEANING LESSONS LEARNED
 - FORENSIC CASE STUDY ... THAT GOES BEYOND AIR FORCE LESSONS LEARNED EXERCISE
 - ... LOOKING FOR MULTIPLE CAUSES AND SYSTEMIC FAILURES
- UNDERSTAND THAT MAJOR SOURCE SELECTIONS ARE INDUSTRIAL POLICY MEASURES



FOREIGN DIRECT INVESTMENT IN US DEFENSE INDUSTRIES

- LEGISLATIVE AND REGULATORY FRAMEWORK
- THREE CASES: anonymous interviews
 - EADS
 - FINMECCANICA
 - BAE
- SOME OBSERVATIONS



LEGISLATIVE & REGULATORY FRAMEWORK

- WWI: SEIZURE OF GERMAN ASSETS, ON NATIONAL SECURITY GROUNDS
- TRADING WITH ENEMY ACT (TWTE) ALSO APPLIED IN WWII
- REVIEW COMMITTEE (CFIUS) ESTABLISHED 1975
- TWTE AMENDED IN 1977
- SUBSTANTIAL TWO-WAY FDI FOR US (ESPECIALLY 1980s AND BEYOND)



Legislative & Regulatory Framework (cont)

- EXON-FLORIO AMENDMENT (1988)
 - STRUCTURE FOR CFIUS REVIEWS
 - ... WITH BROAD MANDATE
- BYRD AMENDMENT (1992)
 - MOTIVATED BY CSF-THOMSON'S PROPOSED ACQUISITION OF LTV
- FOREIGN INVESTMENT AND NATIONAL SECURITY ACT (FINSA, 2007)



EADS (European Aeronautic Defence and Space Company)

- EADS' North American Business Lines: aerial tankers, rotorcraft, transport aircraft, defense electronics, space
- INTERVIEW COMMENTS
 - SUPERIORITY OF A330 VS. B767
 - FACILITIES FOR KC-30 ASSEMBLY
 - EADS AS GLOBAL COMPANY
 - ABILITY TO SATISFY ITAR REQUIREMENTS



EADS STRATEGEMS

- LEAD WITH OFFSETS (reabeled if needed)
 - CUSTOMER HAS RIGHT TO “DOMESTIC RETURN” FROM FOREIGN PRODUCTS
 - ... WITH A MAJORITY OF US CONTENT
- ADAPTING TO THE MARKET
 - ENTRY TO THE DOLLAR AREA
 - US PARTNERS (SUCH AS NG) TO PROVIDE “FIREWALLS” FOR SATISFYING US TECHNOLOGY REGULATIONS



FINMECCANICA

- CORPORATE STRATEGY BASED ON ALLIANCES WITH OTHER FIRMS
- VIEW OF NORTH AMERICA
 - OFFSETS DON'T RULE; QUALITY DOES
 - RIPE FOR INVASION
 - US FIRMS OVERLY DEPENDENT ON DOD's FMS STRUCTURE ABROAD AND SIZE OF DOMESTIC MARKET
 - AGING WORK FORCES
 - ADAPTED TO HIGHLY BUREAUCRATIC PROCESSES
 - ITAR OBJECTIONABLE, FOR A NUMBER OF REASONS
- ➔ AGILE NICHE PLAYERS CAN THRIVE



BAE SYSTEMS

- REINCARNATION OF GENERAL DYNAMICS?
 - AGGRESSIVE ACQUISITION STRATEGY ...
PREFERABLY SUCCESSFUL US FIRMS
 - ...FOR GROWTH AND DIVERSIFICATION “TO
MEET THE NEEDS OF ALL MILITARY
SERVICES”
- OFFSETS RULE: “necessary to focus on creating
jobs”
- LOOKING LIKE AN AMERICAN COMPANY
 - BOARD OF DIRECTORS
 - COMPLIANCE WITH SECURITY REGIME
 - PLAYING THE POLITICAL GAME



THOUGHTS ON THE “CASES”

- WHAT MAKES US MARKET ATTRACTIVE?
 - PUSH: THE EXPORT IMPERATIVE
 - PULL: US DEFENSE MARKET; PROSPECTS OF US PARTNERS
- OVERCOMING OBSTACLES?
 - WORKING AROUND REGULATORY BARRIERS
 - PRODUCTION FACILITIES IN US
 - FINDING GOOD NICHES
- A REAL TWO-WAY STREET?



CLOSING THOUGHTS FOR THE REPORT

- DEFENSE INDUSTRY INCREASINGLY INTERNATIONAL, AND INCREASINGLY COMPLEX (NOT ORIGINAL)
- INCREASING SIZE (AND RISK) OF PROJECTS -- RELATIVE TO SIZE OF FIRMS
- RISE OF “CO-OPETITION”



(MORE) CLOSING THOUGHTS

- RISE OF THE FIRM, AT EXPENSE OF THE “SOVEREIGN” CUSTOMER?
- PROBLEMS FOR DEFENSE ESTABLISHMENTS
 - ADAPTING THE BUREAUCRACY TO THE NEW ENVIRONMENT – INDUSTRIAL AND MILITARY AFFAIRS
 - BEING A FULLY KNOWLEDGEABLE CUSTOMER

